1   WE CLAIM:

2   1.   A method for displaying a zooming operation on a display screen of a

3   client computing platform, the method comprising the steps of:

4   downloading a collection of data from a server for displaying map images of

5   geographic features;

6   using said data to display on the display screen a first image showing geographic

7   features at a first scale with a first level of detail and then to display on the display screen

8   a second image showing the same geographic features at a second scale with a second

9   level of detail; and

10   between the displaying of the first image and the displaying of the second image,

11   displaying on the display screen an intermediate image that combines two component

12   images showing at least some of the same geographic features,

13   wherein the two component images in the intermediate image are at the same

14   scale,

15   wherein the two component images in the intermediate image are registered so

16   that the same geographic features represented in the two component images coincide, and

17   wherein one of the two component images in the intermediate image includes at

18   least a portion of the first image and is formed using data from a first layer of a

19   geographic database and the other of the two component images in the intermediate

20   image is formed using data from a second layer of the geographic database.

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22   2.   The method of Claim 1 wherein at least one of the two component images

23   in the intermediate image is displayed at a less than full color saturation.

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25   3.   The method of Claim 1 wherein the second image is formed using data

26   from the second layer of the geographic database.

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28   4.   The method of Claim 1 wherein the one of the two component images in

29   the intermediate image gradually fades out.

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1   5.   The method of Claim 1 wherein the other of the two component images in

2   the intermediate image gradually fades in.

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4   6.   The method of Claim 1 wherein at least some geographic features

5   represented by the first image are displayed differently in the second image.

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7   7.   The method of Claim 1 wherein the scale used for the intermediate image

8   corresponds to the first scale.

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10   8.   The method of Claim 1 wherein the scale used for the intermediate image

11   corresponds to the second scale.

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13   9.   The method of Claim 1 further comprising the steps of:

14   obtaining geographic data from the first layer of the geographic database to

15   display the first image; and

16   obtaining geographic data from the second layer of the geographic database to

17   display the intermediate image.

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19   10.   The method of Claim 1 wherein at least one of the two component images

20   in the intermediate image is displayed with transparency.

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22   11.   The method of Claim 1 wherein the first image and the second image are

23   displayed using the Scalable Vector Graphics standard.

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25   12.   The method of Claim 1 wherein the first image and the second image are

26   displayed in an Internet browser.

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28   13.   The method of Claim 1 wherein the computing platform is a vehicle

29   navigation system.

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1   14.   A method of providing context while zooming a map display on a client

2 computing platform, the method comprising:

3   obtaining data from a first layer of a geographic database located on a server to

4 represent geographic features at a first scale in a first image;

5   displaying said first image on the display screen;

6   using data from a second layer of the geographic database located on the server to

7 represent at least some of the geographic features at a second scale in a second image,

8 wherein the second scale is different from the first scale;

9   displaying said second image on the display screen after displaying said first

10 image;

11   combining data from at least two separate layers of the geographic database to

12 represent at least some of the geographic features in a third image, wherein the two

13 separate layers include at least one of the first layer and the second layer;

14   displaying said third image on the display screen after displaying said first image

15 and before displaying the second image.

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17   15.   The method of Claim 14 further comprising:

18   prior to the step of using data from the first layer of the geographic database to

19 represent geographic features at the first scale in the first image, downloading the data

20 used to represent the geographic features in the first image, the second image and the

21 third image from the server.

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23   16.   The method of Claim 15 further comprising:

24   downloading a routine from the server that adjusts layer transparency depending

25 upon zoom layer.

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27   17.   A method of presenting a map on a display screen of a client computing

28 platform, comprising the steps of:

29   sending a request from the client computing platform to a server for map data;

1   on the client computing platform, receiving map data from the server, wherein the

2   map data includes data from at least two separate layers, wherein each of said layers

3   represents geographic features at a different level of detail;

4   using the map data from one of said layers to present on a display screen of the

5   client computing platform a first map image that represents geographic features in a first

6   geographic area;

7   initiating a zooming operation on the client computing platform; and

8   presenting an intermediate image on the display screen of the client computing

9   platform, wherein the intermediate image includes at least a portion of the first map

10   image and also includes a second map image of the same geographic features shown in

11   the portion of the first map image using data from another of said layers, wherein the

12   same geographic features shown by the first map image and the second map in the

13   intermediate image coincide.

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15   18.   The method of Claim 17 wherein the step of presenting is performed by an

16   SVG viewer.

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18   19.   The method of Claim 17 further comprising:

19   after presenting the intermediate image, presenting an ending image on the

20   display screen of the client computing platform, wherein the ending image includes at

21   least a portion of the same geographic features shown in the first map image but at a

22   different scale and wherein the ending image is formed using data from a layer other than

23   the layer used for forming the first map image.

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25   20.   The method of Claim 17 further comprising:

26   on the client computing platform, receiving a routine from the server along with

27   the map data, wherein the routine is used to adjust layer transparency depending upon

28   zoom layer.

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30   21.   The method of Claim 17 wherein the first map represents geographic

31   features located along a calculated route.

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2   22.   A method of zooming a map on a computer display comprising:

3   obtaining map data from a server;

4   using said map data for

5   displaying representations of geographic features on a display screen at a first

6   scale with a first level of detail;

7   displaying representations of at least some of the same geographic features on the

8   display screen at a second scale with a second level of detail, wherein the

9   second scale is different from the first scale and the second level of detail

10   is different from the first level of detail; and

11   displaying an intermediate image after the displaying of the representations of the

12   geographic features at the first scale and before the displaying of at least

13   some of the same geographic features at the second scale, wherein the

14   intermediate image overlays representations of at least some of the

15   geographic features at two different levels of detail, wherein the two

16   different levels of detail include one of:

17   the first level of detail and the second level of detail,

18   the first level of detail and a level of detail between the first level

19   of detail and the second level of detail, and

20   the second level of detail and a level of detail between the first

21   level of detail and the second level of detail.

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